

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned patent application:

**Listing of Claims:**

- 42-64. (Canceled)
- 66-73. (Canceled)
- 80-82. (Canceled)
- 85. (Canceled)
- 86. (Canceled)
- 88-92. (Canceled)
- 97-105. (Canceled)

1. (New) A portable heating system comprising:

a vessel having enclosed sides, a thermally conductive bottom end and a top end forming an opening for the introduction and extraction of contents to be heated, the bottom end having an external bottom side for receiving heat;

a heater comprising:

a top housing having a top rim coupled circumferentially to the external bottom side of said chamber, a side structure extending downwardly from said top rim and having a plurality of exhaust vents formed therein, and a bottom rim;

a single thermally conductive member fixedly attached to and extending around the periphery of the external bottom side and having an inner diameter and an outer diameter, the conductive member having a plurality of undulating protrusions extending downwardly from the external bottom side;

a burner having a heat outlet head disposed below and in a central position with respect to said external bottom side and having a fuel intake port configured to couple to a fuel source, the heat outlet head having a diameter less than said thermally conductive member inner diameter and being configured to deliver heat to a central area of the external bottom side;

a bottom housing configured to couple to the bottom rim and substantially encasing the heat source, the bottom housing having a plurality of air inlet vents formed therein.

2. (New) A portable heating system as set forth in claim 1 wherein said single thermally conductive member includes interconnecting segments between adjacent protrusions.

3. (New) A portable heating system as set forth in claim 2 wherein said single thermally conductive member is generally square waved shaped in form.

4. (New) A portable heating system as set forth in claim 2 wherein said interconnecting segments are substantially parallel to said external bottom side.

5. (New) A portable heating system as set forth in claim 1 wherein said single thermally conductive member is composed of an aluminum material.

6. (New) A portable heating system as set forth in claim 1 wherein said single thermally conductive member has a thickness of about 0.012 inches.

7. (New) A portable heating system as set forth in claim 1 wherein said single thermally conductive member has a radial dimension of about 0.3 inches.

8. (New) A portable heating system as set forth in claim 1 wherein said thermally conductive member extends downwardly about 0.5 inches.

9. (New) A portable heating system as set forth in claim 2 wherein said interconnecting segments have a length between protrusions of about 0.05 inches.

10. (New) A portable heating system as set forth in claim 1 wherein said single thermally conductive member has an aspect ratio which is in the range of about 8-9.

11. (New) A portable heating system as set forth in claim 1 wherein said single conductive member is attached to said external bottom side by way of sonic welding.

12. (New) A portable heating system comprising:

a burner having a heat outlet head disposed centrally below a surface to be heated and having a fuel intake port configured to couple to a fuel source, the heat outlet being generally round in form and having a fixed diameter and being configured to deliver heat to a central area of the surface;

a single thermally conductive member fixedly attached to and extending around the outer periphery of the surface and having an inner diameter and an outer diameter, with said inner diameter being greater than said fixed diameter, the conductive member having a plurality of undulating protrusions extending downwardly from the surface;

a skirt having a top rim coupled circumferentially to the surface and encasing the protrusions, the skirt having a series of exhaust vents formed therein and having a bottom rim;

a base configured to couple to the bottom rim and substantially encasing the burner, the base having a set of air inlet vents formed therein.

13. (New) A portable heating system as set forth in claim 12 wherein said single thermally conductive member includes interconnecting segments between adjacent protrusions.

14. (New) A portable heating system as set forth in claim 13 wherein said protrusions and interconnecting segments form a generally square waved shape.

15. (New) A portable heating system as set forth in claim 13 wherein said segments are aligned substantially parallel to the surface to be heated.

16. (New) A portable heating system as set forth in claim 12 wherein said single thermally conductive member is composed of an aluminum material.

17. (New) A portable heating system as set forth in claim 12 wherein said thermally conductive member has a thickness of about 0.012 inches.

18. (New) A portable heating system as set forth in claim 12 wherein said thermally conductive member has a radial dimension of about 0.3 inches.

19. (New) A portable heating system as set forth in claim 12 wherein said protrusions extend downwardly from the surface about 0.5 inches.

20. (New) A portable heating system as set forth in claim 13 wherein said interconnecting segments are about 0.05 inches in length.

21. (New) A portable heating system as set forth in claim 12 wherein said thermally conductive member has an aspect ratio in the range of about 8-9.

22. (New) A portable heating system as set forth in claim 12 wherein said thermally conductive member is attached to said surface to be heated by way of brazing.

23. (New) A portable heating system as set forth in claim 12 wherein said thermally conductive member is attached to said surface to be heated by way of sonic welding.

24. (New) A system for heating a substance, the system comprising:  
a vessel having enclosed sides, a thermally conductive bottom end and a top end forming an opening for the introduction and extraction of the substance, the bottom end having an external bottom side having a central area for receiving heat;  
a series of integrally connected, thermally conductive protrusions fixedly secured to the outer periphery of said external bottom side, the protrusions extending from the vessel external bottom side and defining with the central area a cavity with a fixed diameter; and  
a heater comprising a heat source having a heat outlet header disposed below said cavity and configured to deliver heat to the cavity said header being generally round in shape and having a diameter that is less than said fixed diameter.
25. (New) A system as set forth in claim 24 wherein said protrusions are interconnected by segments between adjacent protrusions.
26. (New) A system as set forth in claim 25 wherein said protrusions and interconnecting segments selectively form a generally square waved shape.
27. (New) A system as set forth in claim 25 wherein said interconnecting segments are disposed substantially parallel to said external bottom side.
28. (New) A system as set forth in claim 24 wherein said protrusions are composed of an aluminum material.
29. (New) A system as set forth in claim 24 wherein said protrusions have a thickness of about 0.012 inches.
30. (New) A system as set forth in claim 24 wherein said protrusions have a radial dimension of about 0.3 inches.

31. (New) A system as set forth in claim 24 wherein the length of said protrusions extending from the external bottom side is about 0.55 inches.

32. (New) A system as set forth in claim 24 wherein said thermally conductive protrusions have an aspect ratio in the range of about 8-9.

33. (New) A system as set forth in claim 24 wherein said thermally conductive protrusions are secured to the external bottom side by way of brazing.

34. (New) A system as set forth in claim 24 wherein said thermally conductive protrusions are secured to the external bottom side by sonic welding.

35. (New) A heating vessel for use with a heater for heating a substance, the heater having a heat source including a burner head and a port for coupling to a fuel supply system, the heating vessel comprising:

a vessel having enclosed sides, a thermally conductive bottom end and a top end forming an opening for the introduction and extraction of the substance, the bottom end having an external bottom surface having a central area; and

a series of integrally connected thermally conductive protrusions fixedly attached to the outer periphery of said external bottom surface, the protrusions extending from the vessel and defining, with the central area, a cavity of a fixed diameter;

wherein the burner head is disposed generally centrally below said cavity and has a diameter that is less than said fixed diameter.

36. (New) A system as set forth in claim 35 wherein said protrusions are interconnected by segments between adjacent protrusions.

37. (New) A system as set forth in claim 36 wherein said protrusions and interconnecting segments selectively form a generally square waved shape.

38. (New) A system as set forth in claim 36 wherein said interconnecting segments are disposed substantially parallel to said external bottom side.

39. (New) A system as set forth in claim 35 wherein said protrusions are composed of an aluminum material.

40. (New) A system as set forth in claim 35 wherein said protrusions have a thickness of about 0.012 inches.

41. (New) A system as set forth in claim 35 wherein said protrusions have a radial dimension of about 0.3 inches.

42. (New) A system as set forth in claim 35 wherein the length of said protrusions extending from the external bottom side is about 0.55 inches.

43. (New) A system as set forth in claim 35 wherein said thermally conductive protrusions have an aspect ratio in the range of about 8-9.

44. (New) A system as set forth in claim 35 wherein said thermally conductive protrusions are secured to the external bottom side by way of brazing.

45. (New) A system as set forth in claim 35 wherein said thermally conductive protrusions are secured to the external bottom side by sonic welding.

46. (New) A portable heating system comprising:  
a vessel defining a cavity having enclosed sides, a thermally conductive bottom end and a top end forming an opening for the introduction to and extraction from said cavity of contents to be heated, the bottom end having an external bottom side for receiving heat;

a top housing having a top rim coupled circumferentially to the external bottom side of said chamber, a side structure extending downwardly from said top rim and having a plurality of exhaust vents formed therein, and a bottom rim;

a bottom housing having a top rim configured to be selectively coupled to the top housing bottom rim and containing a burner having a heat outlet head disposed below the external bottom side when said bottom housing is coupled to said top housing, said bottom housing further having a plurality of air inlet vents formed therein;

wherein said bottom housing is so configured and sized as to be removable from said top housing and temporarily placed for storage in said vessel cavity.

47. (New) A portable heating system as set forth in claim 46 wherein said bottom housing is so configured and sized as to be temporarily placed in said vessel cavity in an upright position with its top rim facing said vessel top end.

48. (New) A portable heating system as set forth in claim 46 wherein said burner fuel intake port is disposed at a lower end of said bottom housing so as to facilitate the coupling to a fuel source in a position below said bottom housing.

49. (New) A portable heating system as set forth in claim 48 wherein, when said fuel source is coupled to said burner fuel intake port, both the bottom housing and the fuel source are storable in said vessel cavity.

50. (New) A portable heating system as set forth in claim 49 wherein said fuel source is threadably coupled to said burner fuel intake port.

51. (New) A portable heating system as set forth in claim 46 wherein said bottom housing also includes an igniter which extends to a position above said heat outlet head.



52. (New) A portable heating system as set forth in claim 51 wherein said igniter has a portion which is disposed above the level of said lower housing top rim.

53. (New) A portable heating system as set forth in claim 52 and including a cover for said vessel top end, said cover having an indentation therein to receive a portion of said igniter when said bottom housing is stored in said vessel cavity and said top end cover is in place over said vessel top end.

54. (New) A portable heating system as set forth in claim 46 wherein said bottom housing top rim is coupled to said top housing bottom rim by way of frictional fit of said top housing bottom rim within said bottom housing upper rim.

55. (New) A portable heating system as set forth in claim 53 and further wherein said bottom housing upper rim includes one or more inwardly extending dimples that register with corresponding slots in said upper housing.